



**TITLE OF THE INVENTION**  
**AUTOANTIGENIC FRAGMENTS, METHODS AND ASSAYS**

**CROSS-REFERENCE TO RELATED APPLICATIONS**

This applications claims the benefit of U.S. Provisional Application Ser. No. 60/082,643, filed April 22, 1998.

**STATEMENT REGARDING FEDERALLY-SPONSORED R&D**

This invention was made in part under Federally Sponsored Research. The U.S. Government may have certain rights in this invention.

**FIELD OF THE INVENTION**

This invention relates to the production of autoantigenic fragments from autoantigens and the uses of the autoantigenic fragments.

**BACKGROUND OF THE INVENTION**

The mature immune system of animals differentiates between self-molecules and non-self-molecules and mounts an immune response only against the latter. The immune system learns which molecules are self through constant exposure to those molecules that are normally a part of the animal. Thus, the mature immune system is tolerized to the presence of molecules that are self. However, the immune system is not tolerized to molecules that are newly presented in the animal. These molecules can be antigens and thereby stimulate an immune response against them. Commonly, newly presented antigens are from an extracorporeal source, such as an infection. In this case, the immune response helps to destroy the source of the antigens and thereby clear the infection from the body.

Newly presented antigens are produced *in vivo* through the degradation of cellular components. When the immune system recognizes these degradation products of self molecules as "non-self" antigens, an